

**DETAILED ACTION****Information Disclosure Statement**

The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

**Specification - Objections**

The abstract of the disclosure is objected to because it is too long. Specifically, the abstract cannot exceed 150 words (See MPEP 37 CFR 1.72). In addition, the disclosure is objected to because the serial number of the referenced application (Page 9, Line 4) is missing. Appropriate corrections are required.

**Claims - Objections**

Claim 2 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. More specifically, in regard to claim 2, the claimed "voltage passed over each electrode in said second plurality of electrodes is the same" is inherent from what is claimed in claim 1 for the same reasoning set forth in the 112 rejection of claim 3 above. In particular, claim 1, from which claim 2 depends, claims a constant voltage passed over the second plurality of electrodes (i.e. a single constant voltage passed over the second plurality of electrodes and a single constant voltage being applied to the plurality would inherently have to be the same over each of the plurality). For purposes of examination the assumed meaning is

“the voltage passed over each electrode in said second plurality of electrodes is the same as the voltage passed over each electrode in said first plurality of electrodes”.

### **Claim Rejections - 35 USC § 112**

Claim 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In regard to claim 1 (and claims 2-4 depending therefrom), applicant is claiming the droplet moving to a “nominal position” which renders the claim vague and indefinite. Specifically, any position of the liquid can be considered as a “nominal position” and therefore the intended meaning is not clear. In certain parts of the specification the “nominal position” is described in terms of a “calibrated position” and in other parts of the specification the “nominal position” is described in terms of a “centered position”. However, the term is not defined within the specification and it is not clear if “nominal position” means “calibrated and centered”, or if it means “calibrated or centered” (the assumed meaning for purposes of examination) or, since applicant is claiming a “method for use in calibrating” it is not clear if the intended meaning is just a “calibrated position”. Furthermore, it is not clear if “nominal position” is limited to either of these two meanings (calibrated” or “centered”) or if other meanings are also intended and the lack of clarity renders the claim vague and indefinite. Furthermore, the specification continually states “nominal calibrated position” and if “nominal” intends to mean “calibrated”, then this reference to “nominal calibrated” is unclear. In regard to claim 3, the claimed “the voltage passed over each electrode in said plurality of electrodes is not the same” further renders the claim vague and indefinite. Specifically, claim 1, from which claim 3 depends, claims a constant voltage passed over the second plurality of electrodes (i.e. a single constant voltage passed over the second plurality of electrodes and a single constant voltage being applied to the plurality would inherently have to be the same over each of the plurality). It is therefore not clear how a single

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constant voltage can be applied over the second plurality but not be the same voltage passed over each electrode. The lack of clarity renders the claim vague and indefinite. For purposes of examination the assumed meaning is “the voltage passed over each electrode in said second plurality of electrodes is not the same as the voltage passed over each electrode in said first plurality of electrodes”. In regard to claim 4, the claimed “is greater than a voltage on said droplet of conducting liquid” renders the claim vague and indefinite. Specifically, applicant has not claimed a voltage on said droplet. Furthermore, the specification discloses the first and second constant voltages as being in contact with the droplet (i.e. on the droplet and it is therefore not clear as to what voltage applicant is referring to as the claimed “voltage on said droplet”). It is not clear if applicant is claiming the claimed “second constant voltage” as greater than the claimed “first constant voltage” (the assumed meaning for purposes of examination) or if some other meaning is intended as the “voltage on said droplet” and the lack of clarity renders the claim vague and indefinite.

### **Claim Rejections - 35 USC § 102**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Kroupenkine et al (U.S. Patent No. 6,538,823), hereinafter ‘823. The applied reference has a common inventor with

the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Kroupenkine et al'823 reads on these claims by disclosing the limitations therein including the following: a method for use in calibrating (column 6, line 39; column 6, lines 53-63); a liquid microlens with a droplet of conducting liquid (abstract) passing a first constant voltage over a first plurality of electrodes (Figures 2c and 3a, column 3, line 59, electrodes "106a" and "106b" and column 4, lines 8 and 52 in that a constant and equal voltage is being applied to all four electrodes and therefore to the "first plurality", i.e. electrodes "106a" and "106b"); passing at least a second constant voltage over a second plurality of electrodes (Figures 2c, 3a, column 3, line 59, electrodes "106c" and "106d", column 4, lines 8 and 52 in that a constant and equal voltage is being applied to all four electrodes and therefore to the "second plurality", i.e. electrodes "106c" and "106d"); and the constant voltage causing the droplet to be in a "nominal position" relative to the electrodes (column 3, line 26, column 4, line 18, column 6, lines 53-64). The liquid is disclosed as spreading evenly between the electrodes and is therefore in a centered position or "nominal position" (to the extent this term is understood) relative to all of the electrodes and therefore relative to either the first or second plurality of electrodes. Regardless, any positioning of the liquid in response to the voltage can be considered as a "nominal position" and the position will inherently be relative to all of the electrodes and therefore will inherently be relative to either the first or second plurality of electrodes. Kroupenkine et al further discloses the voltage passed over each electrode in said second plurality of electrodes is the same as the voltage passed over each electrode in said first plurality of electrodes (the assumed meaning of claim 7, column 4, lines 8-26); the voltage passed over

each electrode in said second plurality of electrodes is not the same as the voltage passed over each electrode in said first plurality of electrodes (the assumed meaning of claim 8, column 4, lines 27-51); and the second constant voltage greater than the first constant voltage (column 4, lines 27-51 where the first constant voltage can be considered "V4" and the second constant voltage can be considered "V2").

Claims 1-4 are also rejected under 35 U.S.C. 102(e) as being anticipated by Bao et al (U.S. Patent No. 6,665,127 B2) hereinafter '127. The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131. Bao '127 reads on these claims by disclosing the limitations therein including the following: a method for use in calibrating (column 1, line 10 - column 2, line 30); a liquid microlens with a droplet of conducting liquid (abstract) passing a first constant voltage over a first plurality of electrodes (Figures 3b, 6 and 8, column 5, line 5-40, column 7, line 19 - column 8, line 30), any two electrodes as the first plurality and a constant and equal voltage is being applied to all four electrodes and therefore to the "first plurality"); passing at least a second constant voltage over a second plurality of electrodes (Figures 3b, 6 and 8, column 5, line 5-40, column 7, line 19 - column 8, line 30), any other two electrodes as the second plurality and a constant and equal voltage is being applied to all four electrodes and therefore to the "second plurality"); and the constant voltage causing the droplet to be in a "nominal position" relative to the electrodes (column 5, line 5-40, column 7, line 19 - column 8, line 30). The liquid is disclosed as spreading evenly between the electrodes and is therefore in a centered position or "nominal position" (to the extent this term is understood) rela-

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tive to all of the electrodes and therefore relative to either the first or second plurality of electrodes. Regardless, any positioning of the liquid in response to the voltage can be considered as a "nominal position" and the position will inherently be relative to all of the electrodes and therefore will inherently be relative to either the first or second plurality of electrodes. Bao et al further discloses the voltage passed over each electrode in said second plurality of electrodes is the same as the voltage passed over each electrode in said first plurality of electrodes (the assumed meaning of claim 2, column 5, line 5-40, column 7, line 19 - column 8, line 30); the voltage passed over each electrode in said second plurality of electrodes is not the same as the voltage passed over each electrode in said first plurality of electrodes (the assumed meaning of claim 3, column 8, line 56 - column 9, line 3); and the second constant voltage greater than the first constant voltage (column 8, line 56 - column 9, line 3).

Claims 1-4 are also rejected under 35 U.S.C. 102(e) as being anticipated by Berge et al. (U.S. Patent No. 6,369,954). In regard to claims 1-4, Berge et al. reads on these claims by disclosing the limitations therein including the following: a liquid microlens with a droplet of conducting liquid (abstract) passing a first constant voltage over a first plurality of electrodes (Figures 3 and 6, column 4, lines 21-53, column 5, lines 28-64 re any two electrodes as the "first plurality" and a constant and equal voltage is being applied to all of the electrodes such as electrodes "36" and "37" and therefore to the "first plurality"); passing at least a second constant voltage over a second plurality of electrodes (Figures 3 and 6, column 4, lines 21-53, column 5, lines 28-64 re any other two electrodes as the "second plurality" and a constant and equal voltage is being applied to all of the electrodes such as electrodes "35" and "17" and therefore to the "second plurality"); and the constant voltage causing the droplet to be in a "nominal position" relative to the electrodes (column 4, lines 21-53, column 5, lines 28-64). Regardless, any positioning of the liquid in response to the voltage can be considered as a "nominal position" and the posi-

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tion will inherently be relative to all of the electrodes and therefore will inherently be relative to either the first or second plurality of electrodes. The claimed “for calibrating” goes to the intended use and furthermore is set forth in the preamble and has not been given patentable weight. Berge et al further discloses the voltage passed over each electrode in said second plurality of electrodes is the same as the voltage passed over each electrode in said first plurality of electrodes (the assumed meaning of claim 2, column 4, lines 44-49); the voltage passed over each electrode in said second plurality of electrodes is not the same as the voltage passed over each electrode in said first plurality of electrodes (the assumed meaning of claim 3, column 4, lines 30-43 in which the electrodes connected to “V1” can be considered the “first plurality” and the electrodes connected to either “V2” or “V3” can be considered as the “second plurality”); and the second constant voltage greater than the first constant voltage (column 4, lines 30-43 in which the electrodes connected to “V1” can be considered the “first plurality” and the electrodes connected to either “V2” or “V3” can be considered as the “second plurality”).

### **Double Patenting**

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In*

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re Van Ornum, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-4 of the instant application are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-4 of U.S. Patent No. 7,006,299 B2 (hereinafter '299). Although the conflicting claims are not identical, they are not patentably distinct from each other because semantic considerations aside, all of the features/limitations recited in claims 1-4 of the instant application, are also recited by claims 1-4 of the '299 patent

***Examiner's Comments***

- i) The instant inventor "Thomas Nikita Krupenkine" is identified as "Timofei Nikita Kroupenkine" on a number of other patents; including: 7,006,299 B2; 6,965,480 B2; 6,778,328 B1; 6,665,127 B2; 6,545,816 B1; 6,545,815 B2 and 6,538,823 B2. Additional comments/conclusions regarding this matter are included in an Interview Summary attached hereto
- ii) Since applicant has not claimed priority in compliance with 35 U.S.C. 120 the references Kroupenkine et al '823 and Bao et al '127 are applicable as prior art.
- iii) Changing "a nominal position" in claim 1 to a "calibrated and centered position" would overcome both the above-noted rejection of claim 1 under § 112/2, and the rejections above under §102(e) in light of Berge et al.

### **Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kroupenkine (United States Patent No.6,965,480 B2), Aizenberg et al. (United States Patent No.6,778,328 B1),Kroupenkine et al. (United States Patent No. 6,545,816 B1) and Kroupenkine et al. (United States Patent No.6,545,815 B2) disclose much of the subject matter currently claimed in the instant application.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any other inquiry concerning this communication or earlier communications from the examiner should be directed to DAVID N. SPECTOR whose telephone number is (571) 272-2338. The examiner can normally be reached at this number Monday through Friday, from 8:00 AM to 5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Mack can be reached on (571) 272-2333. The Official FAX number for the United States Patent and Trademark Office is (571) 273-8300.

**/David N. Spector/**

**Primary Examiner, Art Unit 2873**